

A NEW SPECIES OF *PENSTEMON* (SCROPHULARIACEAE)
FROM THE UINTA BASIN OF UTAH AND COLORADO

John Larry England¹

ABSTRACT.— Named as a new species is *Penstemon albifluvis* J. L. England. The species is known from the Uinta Basin of Utah and Colorado.

The Uinta Basin of Utah and Colorado harbors numerous endemic species of plants, with many of these restricted to the Green River Formation. It is not surprising that this habitat should give rise to yet another narrowly restricted species. The author, while employed by the Bureau of Land Management, encountered a novel *Penstemon* growing on oil shale ledges of the Green River Formation immediately adjacent to the White River. Subsequent examination revealed this botanical novelty to be distinct from any described taxon. Hence, it is described herein.

Penstemon albifluvis England, sp. nov.

Ab *Penstemon scariosus* et *P. strictus* in calycibus et corollis brevioribus et foliis radicalibus paucis vel nullis et pubis antheris brevioribus differt.

Perennial herb; stems ascending to erect, (1) 1.5–4.5 (5) dm tall, (1) 5–20 clustered on a frequently branched caudex, surmounting a taproot; herbage glabrous; leaves entire or with crisped margins (2) 4–10 (12) cm long, 4–6 (11) mm wide, lacking basal leaves or these poorly developed, lower cauline leaves narrowly oblanceolate, petiolate, the upper cauline ones mostly linear to narrowly lanceolate, sessile, often crisped margined; thyrses secund, of 3–10 verticillasters, the upper leafy bracts much reduced, the cymes (1) 2- to 4-flowered, the axis, peduncles, and pedicels glandular-pubescent; sepals 4–6 (7) mm long, lanceolate, acute, glandular-pubescent, the margins narrowly scarious; corolla (18) 20–22 (24) mm long, gradually and

broadly ventricose ampliate, the throat 6–7 mm broad, the tube 14–15 mm long, bilabiate, the upper lip projecting, arched, 7–8 mm long, the lobes of the lower lip spreading, pale lavender, the lobes sometimes light blue, sparsely glandular-pubescent externally, the palate with two ridges 1 mm high on either side of the staminode, glabrous; staminode 9–10 mm long, ending ca 1 mm short of the groove in the palate, straight apically, sparsely orange bearded, with hairs 0.2–0.3 mm long, gradually enlarged apically, from 0.3–0.7 mm broad; fertile stamens reaching the orifice, the anther sacs 3–5 mm long, 0.5 mm broad, pubescent, the hairs white, 0.5 mm long or less, dehiscing the full length, black; capsule 8–11 mm long, broadly ovoid, acuminate; seeds ca 2 mm long.

TYPE.— USA. Utah: Uintah Co., North bank of White River, ca one mile upstream from the Ignatio bridge, 2.5 miles airline distance south of Bonanza, T10S, R24E, S1, elevation 4975 ft, on raw shale slopes of the Evacuation Creek Member of the Green River Formation, associated with *Eriogonum ephedroides*, *Cirsium bamebyi*, *Machaeranthera grindelioides*, *Oryzopsis hymenoides*, and *Forsellesia meionandra*, 9 June 1980, J. L. England 2046 (Holotype BRY; Isotypes to be distributed).

The White River penstemon grows on raw shales with little soil development with *Eriogonum*, *Cirsium*, and *Forsellesia* in the desert saltbrush-sagebrush zone. It is endemic to east central Uintah County, Utah, and adjacent Rio Blanco County, Colorado. The plants flower from late May through June.

¹U.S. Fish and Wildlife Service, 125 South State Street, Salt Lake City, Utah 84138.

TABLE 1. Characteristics of *Penstemon albifluvis* and its relatives.

| | <i>P. albifluvis</i> | <i>P. scariosus</i> | <i>P. strictus</i> |
|-------------------|---|--|--|
| Calyx length | 4-6(7) mm | (4) 6-9 mm | 3-8 (10) mm |
| Corolla length | (18) 20-22 (24) mm | (20) 24-30 mm | (20) 24-30 mm |
| Basal leaves | lacking or poorly developed | well developed | well developed |
| Anther pubescence | hairs less than width of anthers | many hairs longer than width of anthers | many hairs longer than length of anthers |
| Habitat | On poorly developed soils of Green River Formation on very xeric sites; 1500-1700 m | higher elevations to deeper well-developed soils at lower elevations on variable geologic substrates 2000-3000 m | higher elevations to deeper well-developed soils at lower elevations on variable geologic substrates 1800-3200 m |

Penstemon albifluvis is a member of the section *Glabri* (Pennell 1920) and has strong affinities to the pubescent anthered members of that section, most notably *Penstemon scariosus* and *P. strictus*. The characteristics of the White River penstemon and its relatives are compared in Table 1.

LITERATURE CITED

- PENNELL, F. W. 1920. Scrophulariaceae of the Central Rocky Mountain States. Contr. U.S. National Herb. 20: 313-381.